



# National Weather Service




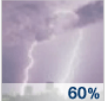

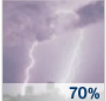





## Raleigh NC

7 Day Forecast

Raleigh, NC

NWS Weather Forecast Office

TODAY	TONIGHT	TUESDAY	TUESDAY NIGHT	WEDNESDAY	WEDNESDAY NIGHT	THURSDAY	THURSDAY NIGHT	FRIDAY
								
70%	60%	60%	60%	70%	70%	30%		
Showers Likely High: 73 °F	Showers Likely Low: 63 °F	Severe Thunderstorms High: 80 °F	Severe Thunderstorms Low: 65 °F	Thunderstorms Likely High: 79 °F	Thunderstorms Likely Low: 66 °F	Chance Showers High: 78 °F	Mostly Cloudy Low: 55 °F	Partly Sunny High: 72 °F

## Raleigh, NC Weather Forecast Office

Nick Petro

Warning Coordination Meteorologist

Hazards this week may include:

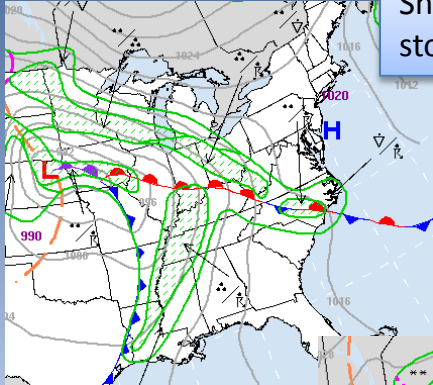
- Severe thunderstorms with damaging winds, large hail, and tornadoes
- Flash flooding
- River flooding

## Weekly Impact Weather Briefing For Central North Carolina Covering the period April 28-May 4, 2014

The purpose of these Monday morning briefings is to give you an idea of what to expect weather-wise for this week, and to give you a heads-up as to what types of hazardous weather impacts, if any, are possible this week.

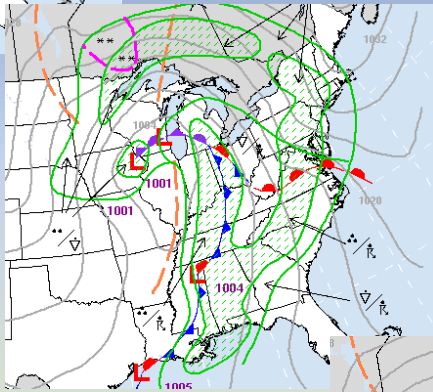
# Weather pattern this week for central NC

Today

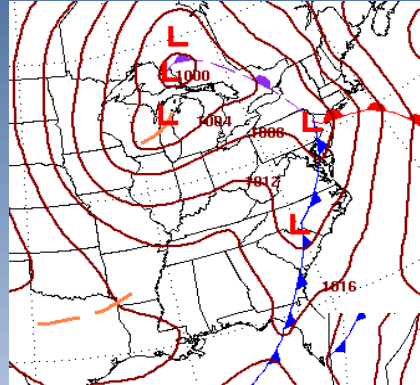


Shower and a few t-storms are likely.

Tuesday

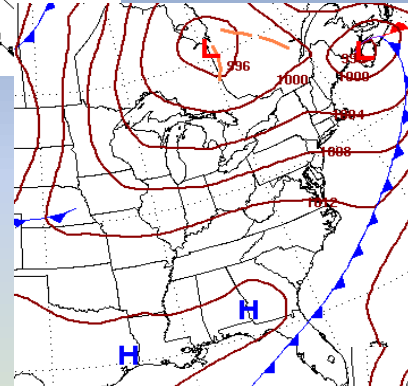


Thursday

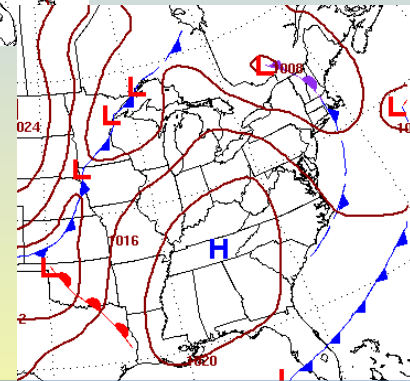


Additional showers on Thursday, then the front moves through. A break in the wet/active weather by the weekend. River flooding possible during the late-week.

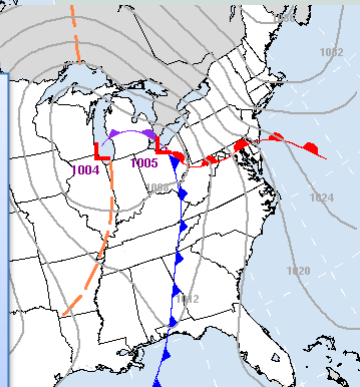
Friday



This Weekend



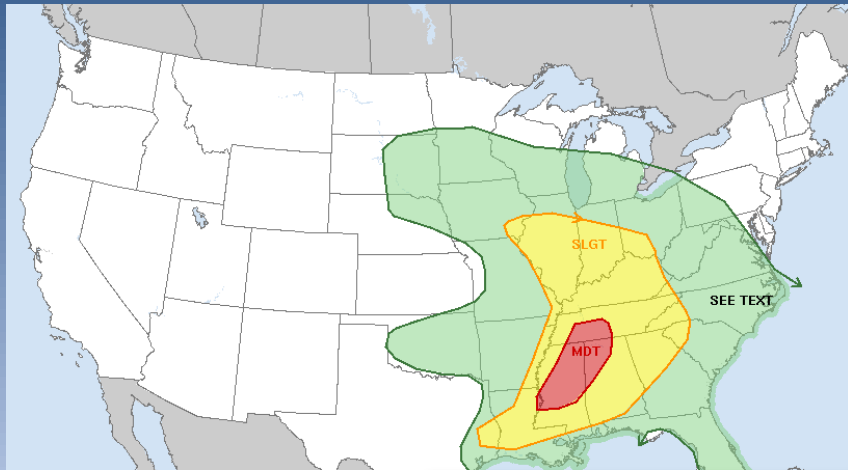
Wednesday



Several rounds of showers & t-storms will cross the Piedmont of central NC Tuesday through Wednesday night. A few of the storms will be severe w/ large hail, damaging wind gusts and isolated tornadoes. The severe weather threat appears greatest Tuesday night, and again Wednesday afternoon into Wednesday evening. In addition, showers and storms may repeatedly cross the same locations Tuesday night and Wednesday. This may lead to flash flooding.

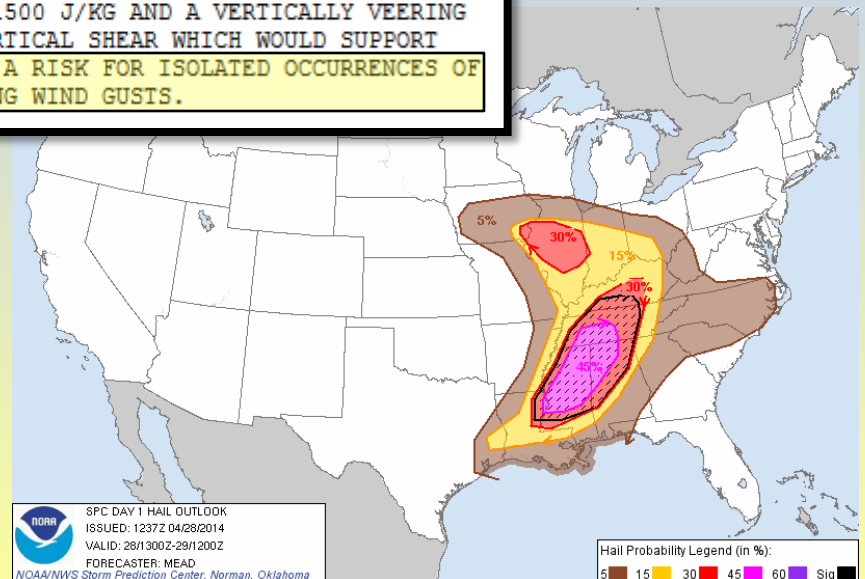
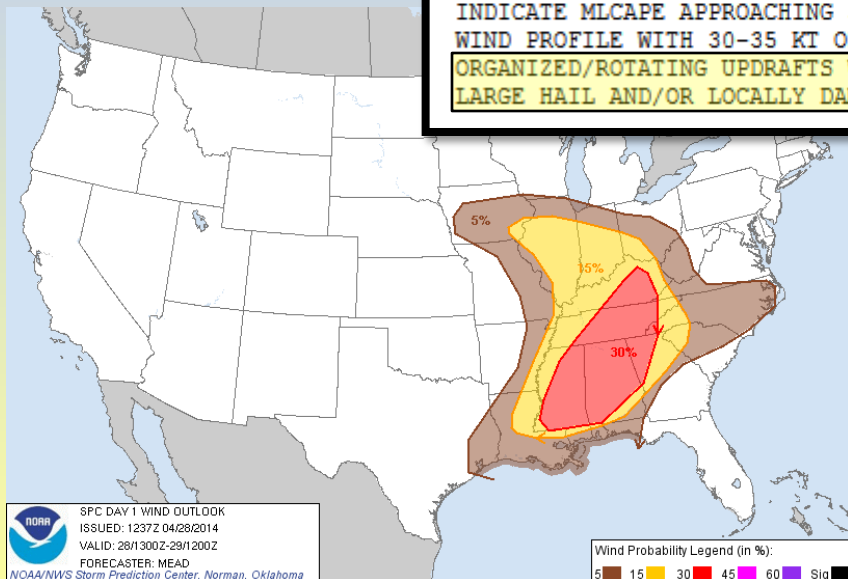
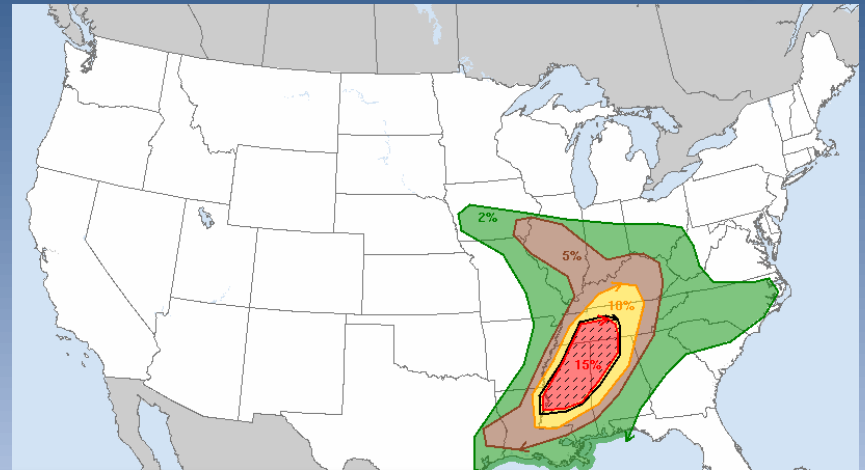
Right now, this weekend should be mostly dry, but you'll want to check back later this week for updates. River flooding, if it develops, may be on-going.

# SPC outlooks for the rest of Today



...CNTRL/ERN NC CAROLINA THIS AFTERNOON...

DESPITE THE PRESENCE OF A BUILDING MIDLEVEL RIDGE...LOW-LEVEL MOISTENING COUPLED WITH DAYTIME HEATING AND CONVERGENCE ALONG THE SLOWLY RETREATING WEDGE FRONT MAY FOSTER AN ENVIRONMENT FAVORABLE FOR ISOLATED SEVERE STORMS THIS AFTERNOON. FORECAST SOUNDINGS INDICATE MLCAPE APPROACHING 500-1500 J/KG AND A VERTICALLY VEERING WIND PROFILE WITH 30-35 KT OF VERTICAL SHEAR WHICH WOULD SUPPORT ORGANIZED/ROTATING UPDRAFTS WITH A RISK FOR ISOLATED OCCURRENCES OF LARGE HAIL AND/OR LOCALLY DAMAGING WIND GUSTS.

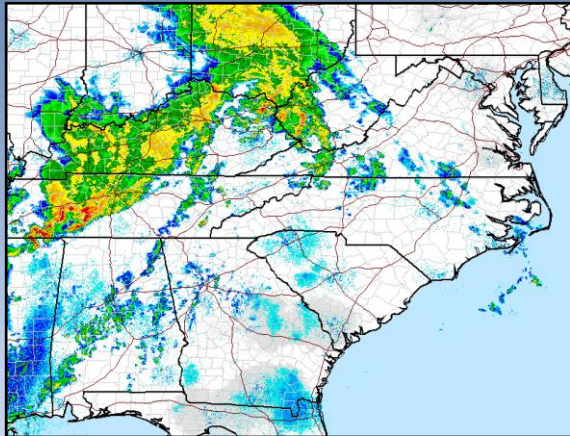




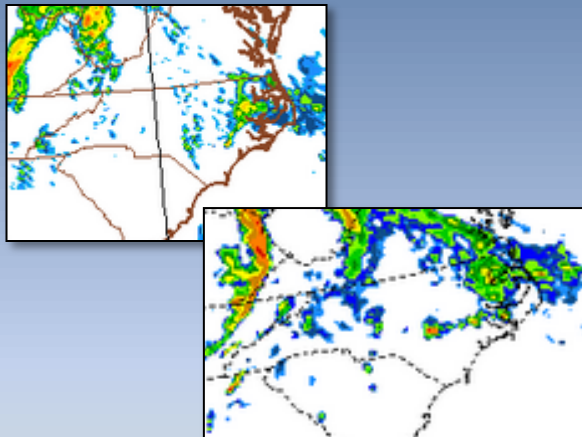
# Timing for the rest of Today

Using the *best* and *worst-case* reflectivity simulations

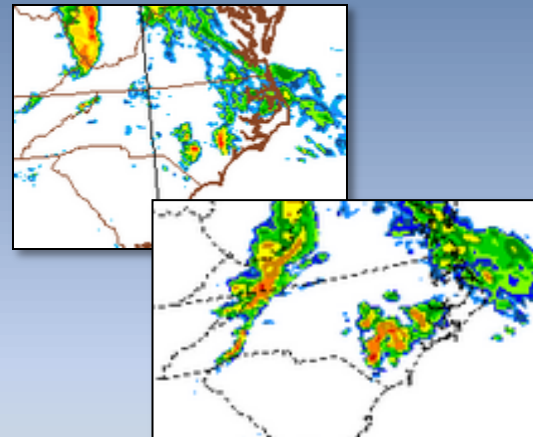
11 AM Live Radar



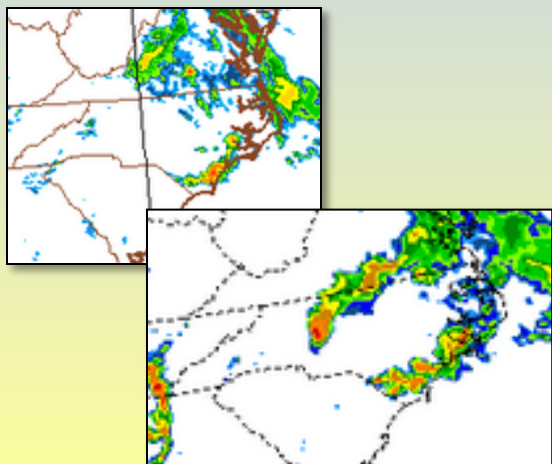
2-3 PM this afternoon



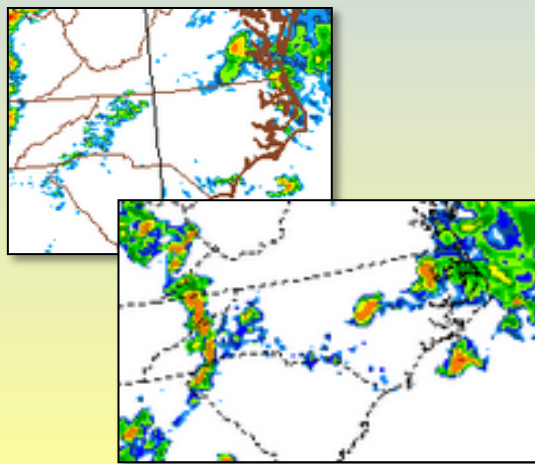
Around 6 PM this evening



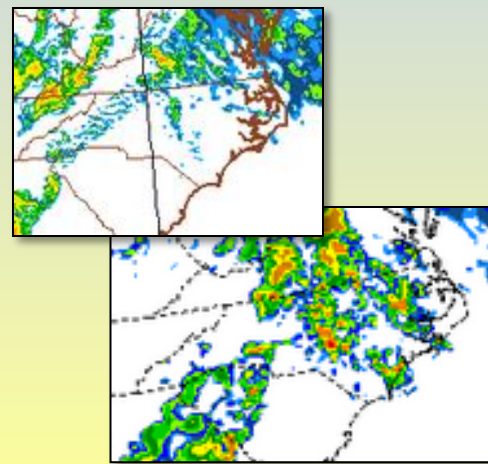
8-9 PM this evening



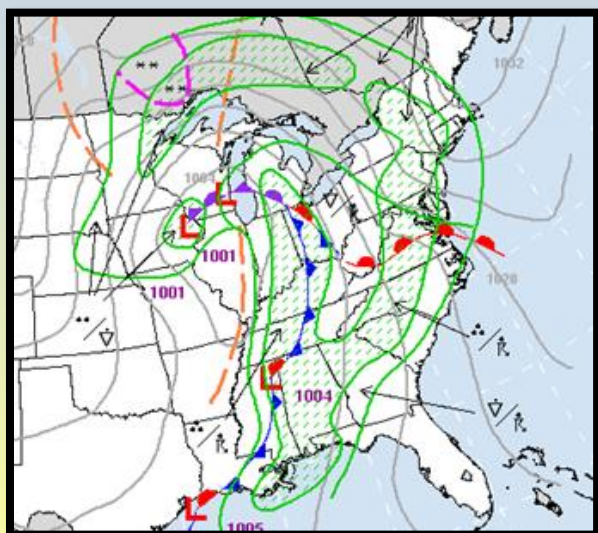
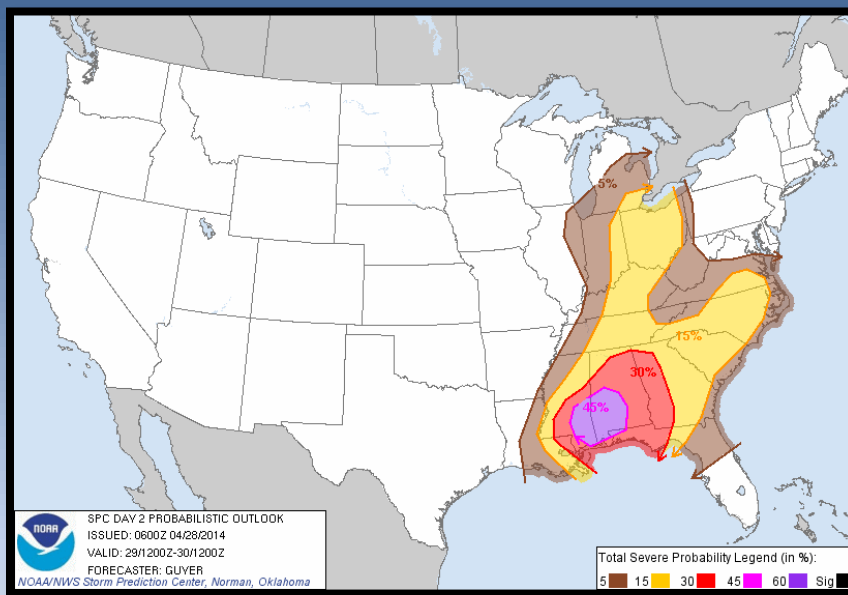
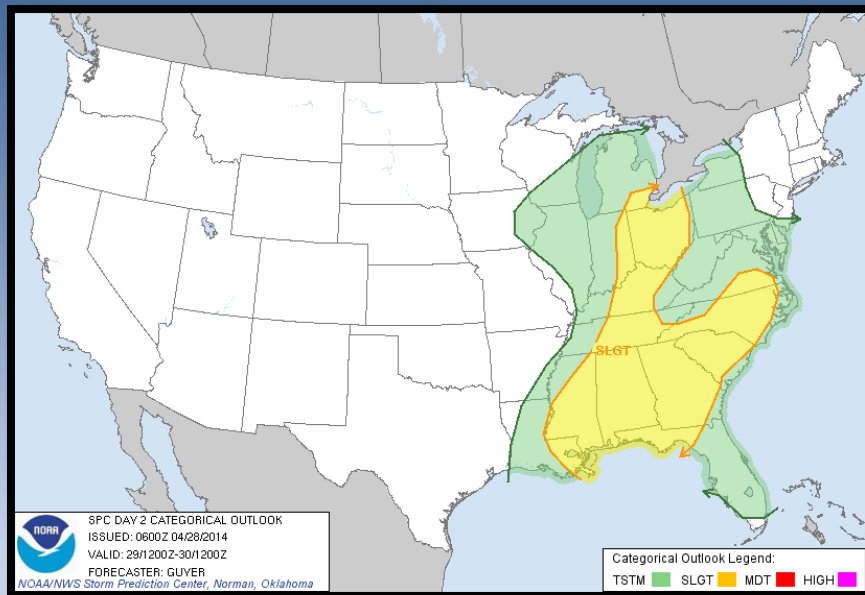
Around midnight



4-5 AM Tuesday



# SPC outlooks for Tuesday



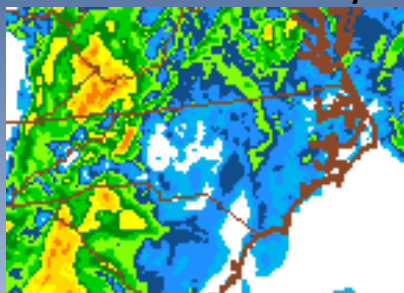
...CAROLINAS...

ALTHOUGH THE DETAILS ARE NOT PARTICULARLY CERTAIN...AT LEAST SOME SEVERE RISK WILL EXIST ACROSS THE REGION ON TUESDAY. THE AIR MASS NEAR/SOUTH OF THE STALLED/SLOW-MOVING FRONTAL BOUNDARY ACROSS THE REGION IS EXPECTED TO STEADILY MOISTEN/DESTABILIZE DURING THE DAY...WITH POSSIBLE WEAK FRONTAL WAVE DEVELOPMENT A POSSIBLE FACTOR AS WELL. WHERE STORMS DEVELOP AND/OR MOVE INTO THE REGION...STRENGTHENING DEEP LAYER/LOW-LEVEL SHEAR COULD SUPPORT A RISK OF SUPERCELLS/BOWS CAPABLE OF WIND DAMAGE AND A TORNADO RISK...PERHAPS ESPECIALLY NEAR/JUST SOUTH OF THE STATIONARY/WARM FRONTAL BOUNDARY.

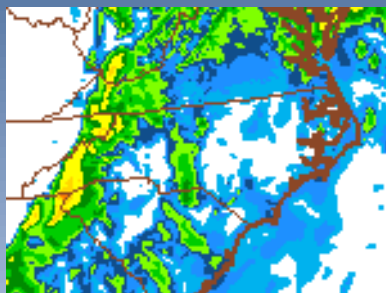
# Timing for Tuesday

Using reflectivity simulation for timing, not intensity

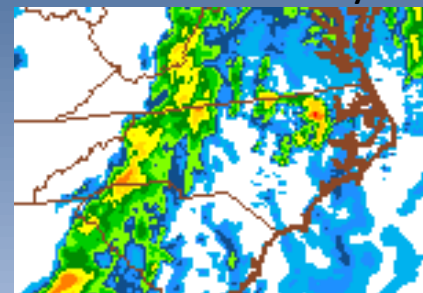
7-9 AM Tuesday



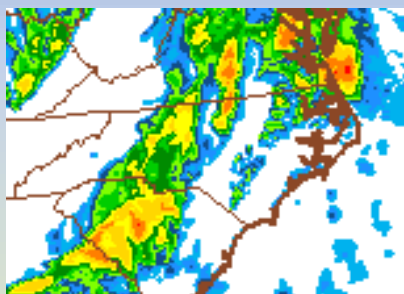
10 AM – Noon Tuesday



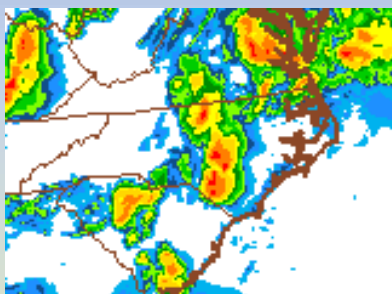
1-3 PM Tuesday



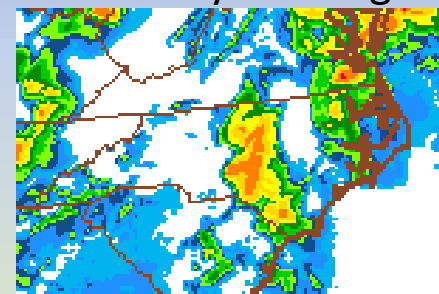
4-6 PM Tuesday



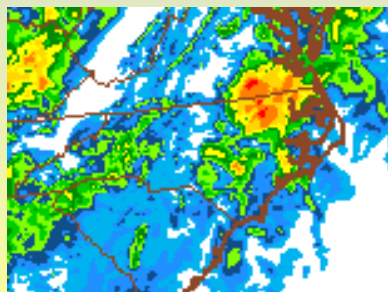
7-9 PM Tuesday



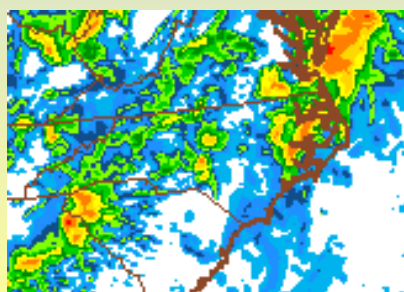
10 PM -Midnight  
Tuesday Evening



1-3 AM Wednesday



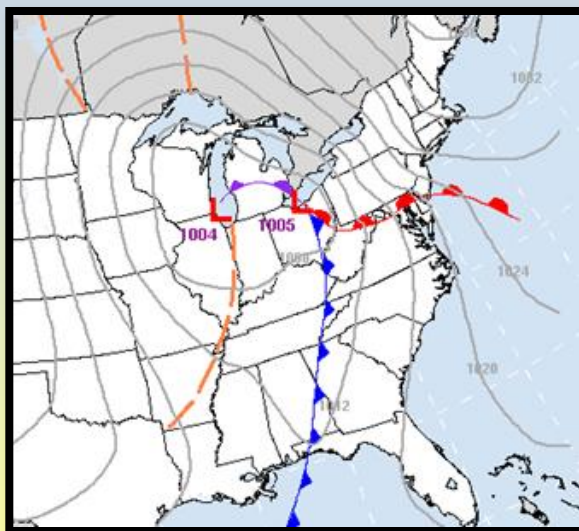
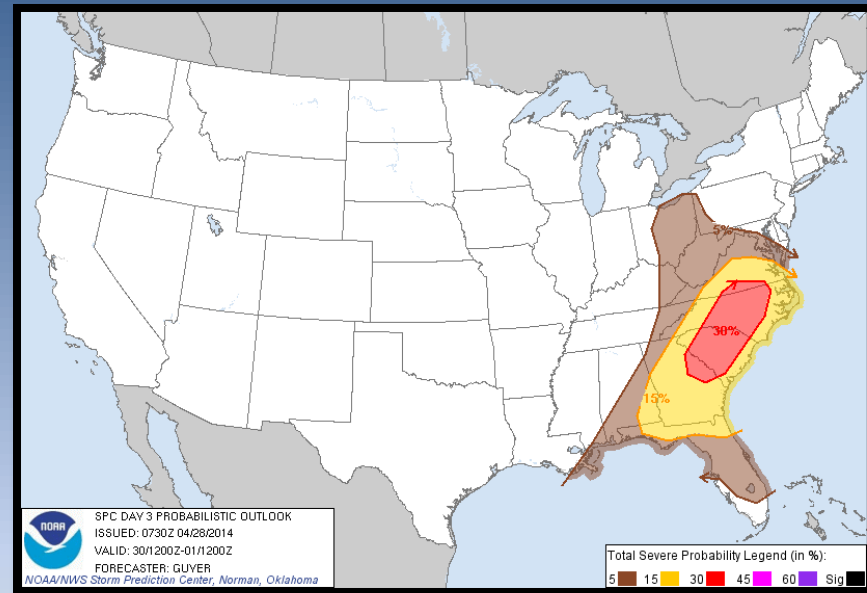
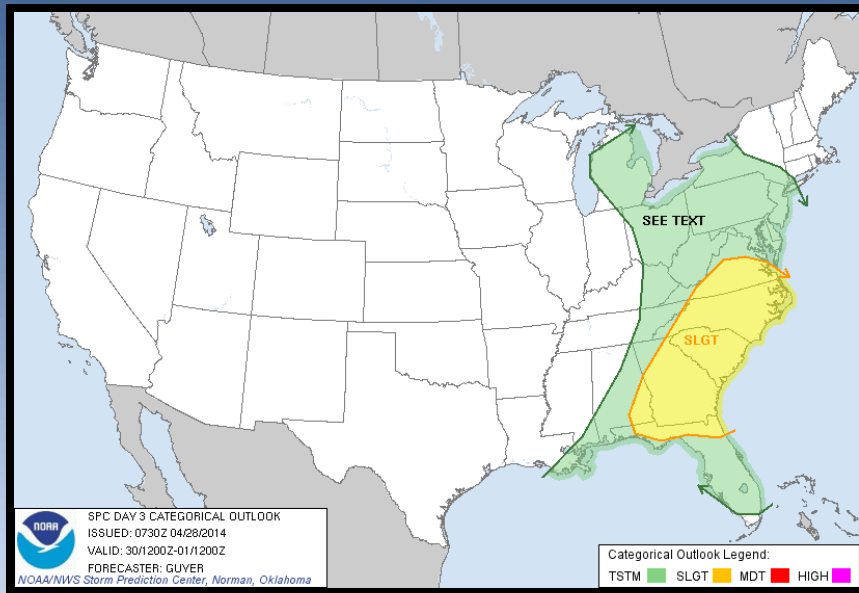
4-6 AM Wednesday



Timing for the best chance for severe storms across central NC appears to be later in the day Tuesday into Tuesday night.



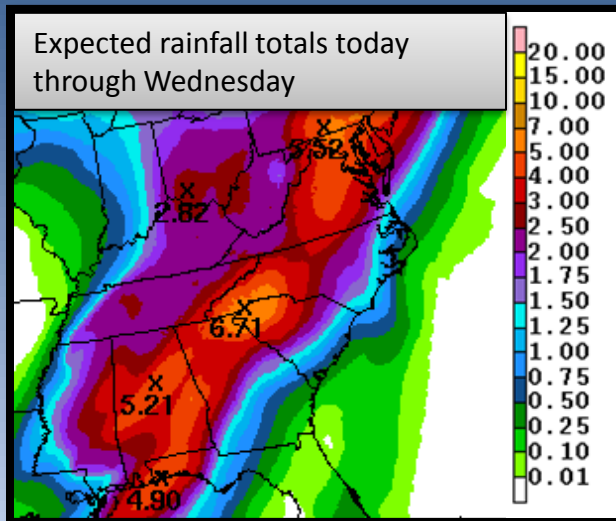
# SPC outlooks for Wednesday



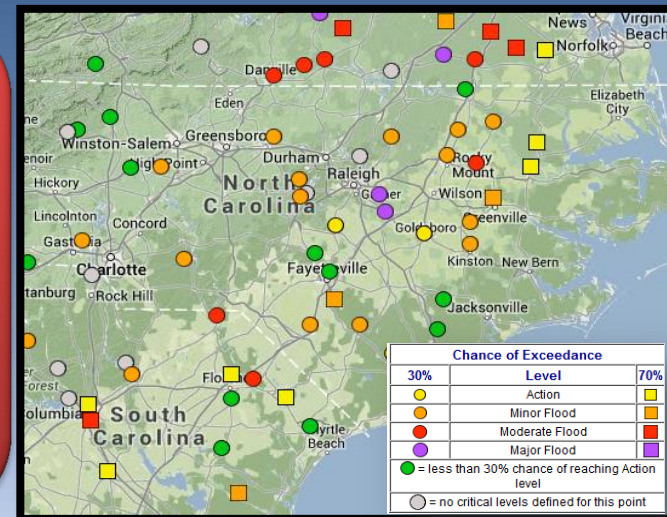
...SOUTHEAST STATES/CAROLINAS TO VA...  
PRONOUNCED LONGWAVE TROUGH WILL REMAIN PREVALENT EAST OF THE ROCKIES WEDNESDAY...WITH EXTENSIVE CYCLONIC UPPER FLOW FEATURING STRONG MID/UPPER-LEVEL SOUTHWESTERLY WINDS FROM THE GULF COAST TO THE APPALACHIANS/MID-ATLANTIC STATES. THESE WINDS ALOFT WILL COINCIDE WITH AN INCREASINGLY MOIST BOUNDARY LAYER /MIDDLE TO UPPER 60S F DEW POINTS/ AHEAD OF A COLD FRONT/POSSIBLE WEAK FRONTAL WAVE ACROSS THE SOUTHEAST STATES NEAR/EAST OF THE SOUTHERN/CENTRAL APPALACHIANS. UNCERTAINTIES DO EXIST REGARDING THE EXTENSIVENESS OF PRE-EXISTING CONVECTION WEDNESDAY MORNING. BUT GIVEN A RELATIVELY MOIST AIR MASS AND AT LEAST MODEST DESTABILIZATION AMID A STRONG WIND FIELD /40+ KT EFFECTIVE SHEAR/...DAMAGING WINDS AND AT LEAST SOME TORNADO RISK APPEARS PROBABLE WEDNESDAY...PARTICULARLY WITHIN A CORRIDOR ACROSS PARTS OF GA INTO THE CAROLINAS/VA.

Timing: Any time during the day, but particularly afternoon and evening on Wednesday.

# Hydro concerns

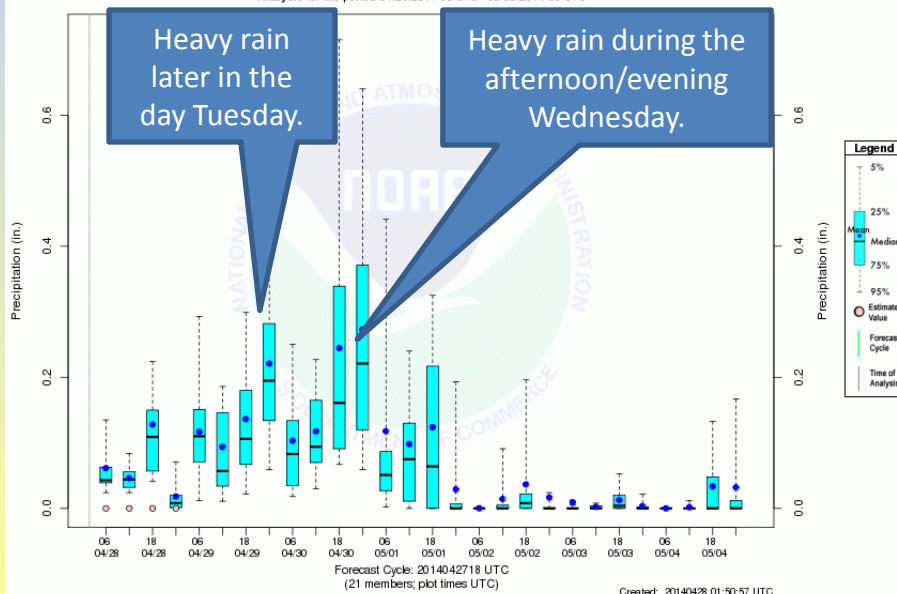


- Potential for urban, poor drainage and small creek flash flooding with any of the slower moving heavy storms.
- Moderate river flooding later in the week.

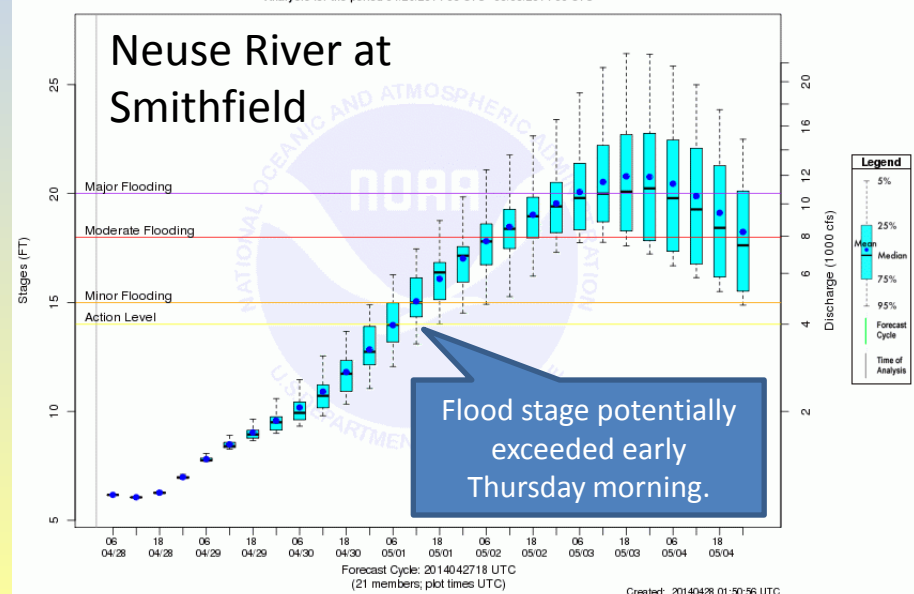


<http://www.erh.noaa.gov/mmef/>

GEFS-based Local Basin-average Precipitation Expected Value Plot  
Neuse River at SMITHFIELD, NC (SMFNT)  
Analysis for the period 04/28/2014 06 UTC - 05/05/2014 00 UTC



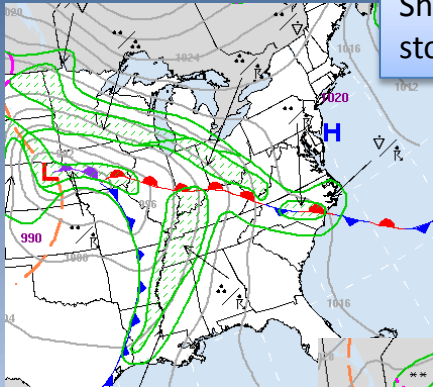
GEFS-based Stage Simulations Expected Value Plot  
Neuse River at SMITHFIELD, NC (SMFNT)  
Analysis for the period 04/28/2014 06 UTC - 05/05/2014 00 UTC





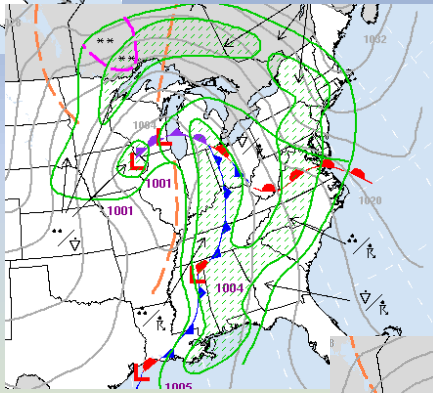
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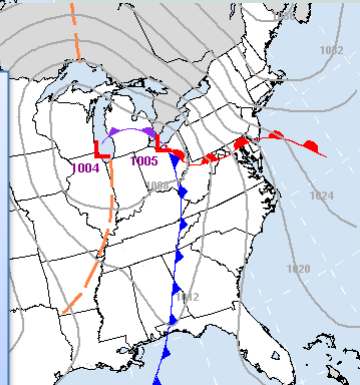


Shower and a few t-storms are likely.

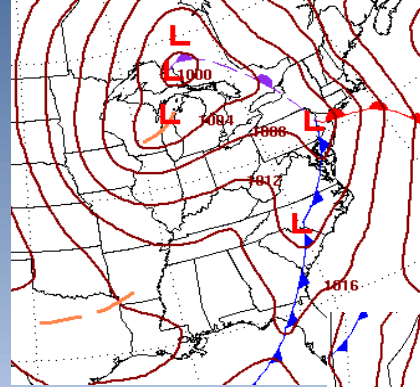
Tuesday



Wednesday

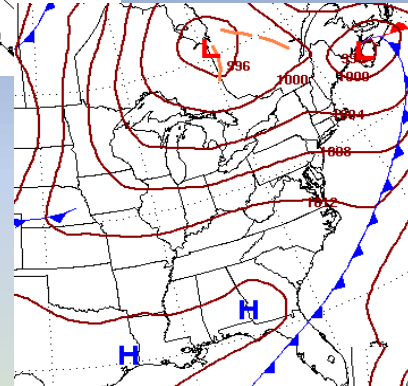


Thursday

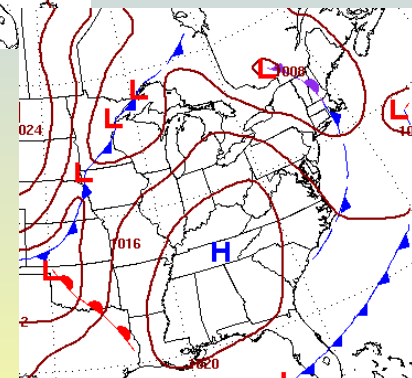


Additional showers on Thursday, then the front moves through. A break in the wet/active weather by the weekend. River flooding possible during the late-week.

Friday



This Weekend



Several rounds of showers & t-storms will cross the Piedmont of central NC Tuesday through Wednesday night. A few of the storms will be severe w/ large hail, damaging wind gusts and isolated tornadoes. The severe weather threat appears greatest Tuesday night, and again Wednesday afternoon into Wednesday evening. In addition, showers and storms may repeatedly cross the same locations Tuesday night and Wednesday. This may lead to flash flooding.

Right now, this weekend should be mostly dry, but you'll want to check back later this week for updates.

# Summary and Highlights

Day (Apr 28-May 4, 2014)	Potential impacts and hazards due to the weather	Forecast confidence (Low, Medium, or High)
Rest of today and tonight	Chance for a few strong to severe t-storms with damaging wind and hail, esp. south of Hwy 64.	Medium
Tuesday & Tuesday night	Late day t-storms with damaging straight-line wind, large hail, and isolated tornadoes. Flash flooding possible later in the day with slower-moving storms.	Medium
Wednesday & Wed night	Another day of severe t-storms. Damaging wind, large hail, and tornadoes possible. On-going risk for localized flooding with slow-moving storms	Medium
Thursday and Thursday night	Still some rain possible. Risk for main stem river flooding increasing.	Low
Friday and Friday night	Main stem river flooding possible.	Low
This weekend	Fair weather. Ongoing river flooding, if it develops.	Low



Outlook for Raleigh shown above. Normal temps for central NC: Mid 70s for highs and lower 50s for lows